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strata in the field, a subject which at the present day some otherwise excellent scientific men are attempting to depreciate.

A second work by the same authors on engineering geology will soon be published. It purports to be a practical guide in the interpretation of those geological phenomena by which engineering works, building materials and water supply are effected, and in the methods of surveying, by which such geological conditions are determined.

SKETCHES OF THE PHYSICAL GEOGRAPHY AND GEOLOGY OF NEBRASKA.¹—This is one of the most interesting and valuable books yet published on the scientific and practical resources of the State of Nebraska. Prof. Aughey has been for many years a most enthusiastic student of its geography and geology, until he has become the reliable authority all over the country. His paper on the Loess published in the Annual Report of the Geological Survey of the Territories for 1874, called out a very complimentary letter from Mr. James Geikie, of Scotland. In this book he has elaborated his former sketches on various subjects connected with the State, and presented them in a clear and graphic manner, which cannot but render them very attractive to the general reader. Although the first edition has been issued but a few months, already a second edition is called for. We congratulate Prof. Aughey on his well-deserved success.

ARCHIVES OF COMPARATIVE MEDICINE AND SURGERY.²—We note with interest the appearance of this new periodical. Its objects are divided between economic and pure science, so as to appeal to a larger constituency than if its scope were confined to either alone. We note various interesting statements of observations on the pathology and anatomy of the lower animals, especially of the Vertebrata. One of these, on the Island of Reil, we transfer to our notes. The *Archives* has a wide field, and, under its present able editor, we hope for its success.

TRAQUAIR ON PLATYSOMIDÆ.³—This memoir fills a hiatus in our knowledge of palæozoic fishes, in a very satisfactory manner. As defined by Dr. Traquair, the family *Platysomidæ* includes the genera *Eurynotus* Ag., *Benedenius* Traqu., *Mesolepis* Young, *Eury-somus* Young, *Wardichthys* Traqu., *Chirodus* McCoy, and *Platysomus* Agass. These genera are fully defined from internal and external characters, and are illustrated by good plates, which include several restorations. Dr. Traquair has been very successful in working out the osteology of these forms, and in discovering

¹ *Sketches of the Physical Geography and Geology of Nebraska*. By SAMUEL AUGHEY, Ph.D., LL.D.

² *Archives of Comparative Medicine and Surgery*; a Quarterly Journal of the Anatomy, Pathology and Therapeutics of the Lower Animals. Edited by EDWARD SPITZKA, M.D. New York, W. L. Hyde & Co., Printers.

³ On the Structure and Affinities of the *Platysomidæ*. By RAMSEY H. TRAQUAIR, M. D. From the Transactions of the Royal Society of Edinburgh, Vol. XXIX, 1879.

new characters. He throws much light on their systematic position, especially in demonstrating the differences which distinguish them from the *Dapediidae*, and their near affinity to *Palæoniscidae*. Indeed the author scarcely adduces sufficient ground for their separation as a family from the latter.

Two of the important characters on which he lays most stress, viz., the non-coincidence of the median fin-rays with their inter-neural and interhæmal bones, and the absence of suboperculum, undoubtedly remove the fishes which possess them, from the order *Isospondyli*, where the present writer formerly placed them. The degree of ossification of the cranial and vertebral bones, is of less importance. Dr. Traquair places this family and its allies in the *Chondrostei* (which he calls *Accipenseridi*) with *Accipenseridae*, etc. But he does inform us as to the structure of the articulations of the pectoral and ventral fins; perhaps his material does not permit it. A comprehension of this part of the skeleton, is, in the present writer's estimation, necessary to the determination of the position of any fish in the system. The *Chondrostei* form a group, intermediate between the *Crossopterygia* and other fishes (or *Actinopteri*)¹ having the ventral fin of the former, and the pectoral of the latter. From all the evidence yet advanced, the ventral fins of this group appear to be those of the tribe *Actinopteri*, with which they should probably be associated. In this group they will occupy the lowest position, below the *Ginglymodi* (*Lepidosteidae*, etc.), differing from all the fishes which compose the former, in the primitive character of the fin-rays already mentioned. They will form a distinct group of the same rank as those I have called orders, to which the name of *Lysopteri* may be given. The definition will be, *actinopterous fishes with the median fin-rays not joined to the interhæmal and interneural bones, and not coinciding with them in number; and without suboperculum.*

Dr. Traquair shows the entire insufficiency of Prof. Young's system of palæozoic fishes, but seems not to be sure but that *Lepidosteus* has some relatives from below the upper cretaceous formations. He writes ganoids, with a capital G, as though it were a natural group. Certainly the arguments adduced by the supporters of this division (*e. g.* Dr. Lütken), as well as by its opponents, show that it does not conform to Dr. Traquair's definition of a true division (p. 386); "What we require is that the assemblage of characters shall be exclusive."

The characters adduced by Dr. Traquair, appear to confirm the writer's reference of the *Dapediidae* to the *Isospondyli*.—E. D. C.

WE HAVE SELDOM MET with a case of more unblushing piracy than lies before us in "Rand, McNally & Co.'s Geological and Mineralogical Map of Colorado, copyright secured 1879."

¹ Proceed. Amer. Ass. Adv. Sci. 1878. 293.

Although this is simply a copy of Dr. Hayden's U. S. Geological Survey Map, no recognition of the fact appears on the publication in question. The officers of United States Surveys are very liberal with their publications, and will furnish every facility to publishers and editors, expecting only the easily given return of credit. This every compiler is bound to give, by all sentiments of both honor and patriotism.

RECENT BOOKS AND PAMPHLETS.—De i de brasilianske Knoglehuler fundue Navlesvin-Arter. Af. J. Reinhardt. (Repr. from Vidensk. Meddel. fra den naturh. Foren. i Kjöbenhavn.) 8vo, pp. 33, 1880. From the author.

Reports on the results of dredging under the supervision of Alexander Agassiz, in the Caribbean sea, 1878-79, by the United States coast survey steamer *Blake*, Commander J. R. Bartlett, U.S.N., commanding. VI. Report on the Corals and Antipatharia. By L. F. Pourtales. (In Bull. Mus. Comp. Zoöl., Vol. vi, Feb., 1880.) From the museum.

Some thoughts on the glycogenic function of the Liver. II. Disposal of Waste. By Joseph LeConte. (Ext. from Am. Jour. Sci., Vol. XIX, Jan., 1880.) 8vo, pp. 25-29. From the author.

The old river-beds of California. By Joseph LeConte. (Extr. from Am. Journ. Science, Vol. XIX, March, 1880.) Pages 176-190. From the author.

North American Mesozoic and Cænozoic Geology and Palæontology. By S. A. Miller, Esq. (Extr. from Journ. Cincin. Soc. Nat. Hist., Oct., 1879.) 8vo, pp. 44. From the author.

Mémoire sur la Faune ichthyologique de l'Isle Saint-Paul. Par M. H.-E. Sauvage. (Extr. from Arch. de Zool. exp. et generale, t. VIII, 1879.) 8vo, pp. 45, pls. I-III. From the author.

The American Journal of Microscopy and Popular Science. Vol. v, No. 3, March, 1880. From the editors.

Proceedings of the Academy of Natural Sciences of Philadelphia. Part III, Nov. and Dec., 1879. 8vo, pp. 217-490, pls. IV, and pp. 9-120, Part I, 1880. From the academy.

Un mot sur quelques cétacés échoués sur les Côtes de la Méditerranée et l'ouest de la France pendant le courant des années 1878 et 1879. Par M. P. J. Van Beneden. (Extr. from Bull. de l'Acad. Roy. de Belgique. 2^e Ser., Tome XLIX, No. 2; fev., 1880.) 8vo, pp. 12. From the author.

Descriptions of New Species of Crinoids, from the Kaskaskia group of the Sub-carboniferous. By A. G. Wetherby. (Extr. from the Journ. Cincin. Soc. Nat. Hist., Oct., 1879.) 8vo, pp. 7, pl. 1.

Descriptions of New Crinoids from the Cincinnati group of the Lower Silurian and the Sub-carboniferous of Kentucky. By A. G. Wetherby. (Extr. Journ. Cin. Soc. Nat. Hist., 1879.) 8vo, pp. 9, pl. 1. From the author.

Silurian ichnolites, with definitions of new genera and species. Description of two new species from the Niagara group, and five from the Keokuk group. Note upon the habits of some fossil Annelids. By S. A. Miller, Esq. (Extr. Journ. Cin. Soc. Nat. Hist., 1879.) 8vo, pp. 7, pls. 3. From the author.

Notes on North American Decapoda. By J. S. Kingsley. (Extr. Proc. Bost. Soc. Nat. Hist. xx.) 8vo, pp. 145-160, 1879. From the author.

Neue Amphibien und Reptilien. Beschrieben von Dr. J. G. Fischer. Hamburg. (Sep.-Abdr. aus d. Arch. f. Naturgesch. xxxvi, Jahrg., 1 Bd.) 8vo, pp. 215-227, pls. 2. From the author.

Geological Survey of New Jersey. Annual Report of the State Geologist for the year 1879. By Geo. H. Cook. 8vo, pp. 199, with map. From the State geologist.

Supplementary note on the Vertebræ of Ornithopsis Seeley, Eucamerotus Hulke. By J. W. Hulke, Esq., F.R.S., F.G.S. (Ext. Quar. Journ. Geolog. Soc., Feb. 1880.) 8vo, pp. 31-35, pls. 2. From the author.

Vectisaurus valdensis, a new Wealden Dinosaur. By J. W. Hulke, Esq., F.R.S.,